

A NEW RECORD OF CUPRESSUS FROM SW IRAN

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ABSTRACT. *Cupressus sempervirens* L. var. *horizontalis* (Miller) Gordon is recorded from SW Iran, to the south of Shiraz. This new isolated relict locality is geographically far distant from the other Iranian stations, in the Elburz mountains to the north and, probably, in the Baluchistan area to the east. The significance of the occurrence of this Mediterranean element in Irano-Turanian territory is briefly discussed.

Cupressus sempervirens L. var. *horizontalis* (Miller) Gordon, centred mainly in the eastern part of the Mediterranean basin has been recorded from N Iran by Boissier (1884), Parsa (1950) and more recently by Riedl in *Flora Iranica* (1968). Parsa (1950) and Sabeti (1966) record it also from SE Iran where Bornmüller collected it: Gark valley, Taftan mountain and Sangun, 31 miles NE of Khach. Although such later authors as Zohary (1963), Riedl (1968) and Mobayen & Tregubov (1970) treat the wild *Cupressus* as entirely limited to the Elburz mountains in the north of the country, there seems no reason why the SE Iranian records should not be accepted.

In 1973 during a plant collecting trip from Firuzabad (S of Shiraz) west to Farashband, I discovered a *Cupressus* growing along a stream and in two ravines. There were about 100 plants of various age groups in this area which is climatically favourable and little disturbed by man. Recently I revisited the locality, first with Dr P. H. Davis and later with Professor G. Pontecorvo, who confirmed my belief that *Cupressus* is undoubtedly wild here.

The small village of Khergheh is about 25 km on the road from Firuzabad to Farashband at an altitude of 1600 m. The first tree is seen about 1 km before the village at the right side of the stream. Other trees appear after the village on the right side of the road, mainly along the stream and in two ravines. Some are on the mountain slopes above the ravines, growing directly out of the limestone rock. Villagers told me that there are also a few isolated stunted trees higher up on the mountains.

The oldest tree was 5 m in circumference near the base of the trunk and about 12 m high with big branches from the base. I also found two more trees approaching this size along one of the gorges. The youngest tree seen was about 2 m high. The girth of the largest tree indicates that it must be several centuries old and the presence of young trees shows that they are still regenerating. The growth of some trees directly out of limestone rock and far away from the stream also suggests that they are growing in their natural habitat. The other woody plants growing in this locality are the following: *Acer monspessulanum* L. subsp. *cinerascens* (Boiss.) Yaltirik and *persicum* (Pojark.) Rech. f.; *Amygdalus elaeagnifolia* Spach; *A. scoparia* Spach (usually dominant); *Cerasus microcarpa* (C. A. Mey.) Boiss.; *Crataegus azarolus* L. subsp. *aronia* (L.) H. Riedl; *Ephedra strobilacea* Bge. (?); *Ficus carica* L. var. *rupestris* Hausskn.; *Myrtus communis* L.; *Pistacia atlantica* Desf. s.l.; *P. khinjuk* Stocks; *Punica granatum* L.; *Pyrus* sp.; *Quercus brantii* Lindl.; *Rhamnus* sp.; *Rubus sanctus* Schreber (*R. anatolicus* R. Focke);

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Salix acmophylla Boiss., (by streams) with undergrowth of *Ebenus stellata* Boiss. and *Convolvulus leiocalycinus* Boiss. This Irano-Turanian community comprises a luxuriant facies of what Zohary (1963) calls the *Pistacia-Amygdalus* steppe-forest.

It is not clear why previous collectors have missed this accessible station of *Cupressus juniperus excelsa* (*polycarpus*) has been reported to grow on the mountains near Firuzabad, so it is possible that the Cypress might have been mistaken for a Juniper.

The following gathering of *Cupressus sempervirens* var. *horizontalis* is deposited in the herbarium of the Botany Department, Pahlavi University, Shiraz, and in that of the Royal Botanic Garden, Edinburgh: Fars, 24–27 km from Firuzabad to Farashband, near Khergheh village, c. 1600 m, Davis & Bokhari (D. 56383).

This isolated, obviously relict locality for *Cupressus* lies near the south-east extremity of the *Quercus brantii* belt which extends from Kurdistan to south of Shiraz, along the south-west slopes of the Zagros range. It is in this wooded belt of the Irano-Turanian region that the highest number of Mediterranean elements occurs in Iran. One of these is *Myrtus communis*, which is found both in the new locality for *Cupressus* and in the Elburz, but extends eastwards as far as Pakistan.

Apart from the Elburz populations and the records from SE Iran, the nearest wild stations of the wild Cypress to Firuzabad are in S Anatolia (Taurus mountains), Latakia, Lebanon and Jordan (disjunct between Gilead and the more arid Edom). The occurrence of this Mediterranean species on the north side of the Elburz range (i.e. within the Hyrcanian province of the Euro-Siberian region) has always been anomalous, and its discovery in the southern Zagros makes one wonder if intermediate stations may not be discovered in the south-west of the central Zagros, in association with some of the woody species with which it grows near Firuzabad. In this connection it is perhaps significant that the Mediterranean *Pinus brutia* and *Arbutus andrachne* grow in Iraqi Kurdistan, and that *Platanus orientalis* is wild along the stream at Khergheh. It seems likely that the present disjunct distribution of *C. sempervirens* is tied up with the history of the Tethys, and a relict of a more continuous distribution which may once have included the ancestors of two close relatives: *C. duclouxiana* Hickel in Yunnan, and *C. dupreziana* A. Camus in the mountains of the central Sahara.

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